

**Notice of Allowability****Application No.**

10/673,656

**Examiner**

CHRISTOPHER P. GREY

**Applicant(s)**

NAKAMURA ET AL.

**Art Unit**

2474

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the communication filed on 1/26/11.
2. ☒ The allowed claim(s) is/are 23-26.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☒ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Thomas Bonacci on 4/7/11.

The application has been amended as follows:

23. (Currently Amended) A digital radio communication method comprising the steps of:

transmitting, on a transmitting side, known pilot symbols at every slot, a predetermined number of said slots forming a frame;

receiving, on a receiving side, said known pilot symbols; ~~and carrying out coherent detection using the received known pilot symbols,~~

wherein said known pilot symbols of each slot consists of a known pilot symbol portion and a sync word portion for frame alignment, the known pilot symbol portion and the sync word portion in each slot being aligned consecutively; ~~and~~

**establishing frame alignment using said known sync word portion; and**  
**after establishing the frame alignment, carrying out coherent detection**  
**using the received known pilot symbols,**

wherein said step of carrying out coherent detection carries out the coherent detection using said known pilot symbol portion **and sync word portion.** ~~and employs,~~

~~after establishing the frame alignment using said sync word portion, said sync word portion for the coherent detection.~~

24. (Previously Presented) The digital radio communication method as claimed in claim 23, wherein said known pilot symbols of each slot comprise multiple known pilot symbol portions and multiple sync word portions aligned consecutively, and wherein said known pilot symbol portions and said sync word portions are transmitted alternately in each slot.

25. (Currently Amended) A reception method for a digital radio communication method comprising the steps of:

receiving known pilot symbols, which have been transmitted at every slot, a predetermined number of said slots forming a frame; ~~and~~

~~carrying out coherent detection using the received known pilot symbols,~~

wherein said known pilot symbols of each slot consist of a known pilot symbol portion and a sync word portion for frame alignment, the known pilot symbol portion and the sync word portion in each slot being aligned consecutively; ~~and~~

**establishing frame alignment using said known sync word portion; and**  
**after establishing the frame alignment, carrying out coherent detection**  
**using the received known pilot symbols.**

wherein said step of carrying out coherent detection carries out the coherent detection using said known pilot symbol portion **and sync word portion.** ~~and employs,~~

~~after establishing the frame alignment using said sync word portion, said sync word portion for the coherent detection.~~

26. (Previously Presented) The reception method for a digital radio communication method as claimed in claim 25, wherein said known pilot symbols of each slot comprise multiple known pilot symbol portions and multiple sync word portions aligned consecutively, and wherein said known pilot symbol portions and said sync word portions are transmitted alternately in each slot.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER P. GREY whose telephone number is (571)272-3160. The examiner can normally be reached on 10AM-7:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moe Aung can be reached on (571)272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher P Grey/  
Examiner, Art Unit 2474